AMENDED IN SENATE SEPTEMBER 7, 2007

AMENDED IN SENATE SEPTEMBER 4, 2007

AMENDED IN SENATE AUGUST 20, 2007

AMENDED IN SENATE JULY 10, 2007

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CALIFORNIA LEGISLATURE—2007–08 REGULAR SESSION

ASSEMBLY BILL No. 1613

Introduced by Assembly Member Blakeslee
(Coauthors: Assembly Members Adams, Emmerson, Huffman, Parra, and Torrico)

February 23, 2007

An act to add Chapter 8 (commencing with Section 2840) to Part 2 of Division 1 of the Public Utilities Code, relating to energy.

LEGISLATIVE COUNSEL'S DIGEST

AB 1613, as amended, Blakeslee. Energy: Waste Heat and Carbon Emissions Reduction Act.

~~Under~~

(1) Under existing law, the Public Utilities Commission (PUC) has regulatory authority over public utilities, including electrical corporations, as defined. Existing law authorizes the PUC to fix the rates and charges for every public utility, and requires that those rates

and charges be just and reasonable. The existing Public Utilities Act requires the PUC to review and adopt a procurement plan for each electrical corporation in accordance with specified elements, incentive mechanisms, and objectives. The act additionally requires the PUC, in consultation with the Independent System Operator, to establish resource adequacy requirements for all load-serving entities, as defined, in accordance with specified objectives.

The existing Warren-Alquist State Energy Resources Conservation and Development Act establishes the State Energy Resources Conservation and Development Commission (Energy Commission) and requires it to undertake a continuing assessment of trends in the consumption of electricity and other forms of energy and to analyze the social, economic, and environmental consequences of those trends and to collect from electric utilities, gas utilities, and fuel producers and wholesalers and other sources, forecasts of future supplies and consumption of all forms of energy.

This bill would enact the Waste Heat and Carbon Emissions Reduction Act. The bill would state the intent of the Legislature: (A) to dramatically advance the efficiency of the state's use of natural gas by capturing unused waste heat, (B) to reduce wasteful consumption of energy through improved residential, commercial, institutional, industrial, and manufacturer utilization of waste heat whenever it is cost effective, technologically feasible, and environmentally beneficial, particularly when this reduces emissions of carbon dioxide and other carbon-based greenhouse gases, and (C) to support and facilitate both customer- and utility-owned combined heat and power systems.

This bill would authorize the PUC to require an electrical corporation to purchase excess electricity, as defined, delivered by a combined heat and power system, as defined, that complies with certain sizing, energy efficiency, and air pollution control requirements, but would authorize the PUC to establish a maximum kilowatthours limitation on the amount of excess electricity that an electrical corporation is required to purchase if the PUC finds that the anticipated excess electricity generated has an adverse effect on long-term resource planning or the reliable operation of the grid. The bill would require the PUC to establish, in consultation with the Independent System Operator, tariff provisions that facilitate the provisions of the act and the reliable operation of the grid. The bill would require every electrical corporation to file a standard tariff with the PUC for the purchase of excess electricity from an eligible customer-generator, as defined, would

require the electrical corporation to make the tariff available to eligible customer-generators within the service territory of the electrical corporation upon request, and would authorize the electrical corporation to make the terms of the tariff available in the form of a standard contract. The bill would require that the costs and benefits associated with any tariff or contract be allocated to benefiting customers, as defined. The bill would require the PUC to establish for each electrical corporation, a pay-as-you-save pilot program, meeting certain goals, for eligible customers, as defined, to finance all of the upfront costs for the purchase and installation of combined heat and power systems. The bill would require the PUC, in approving an electrical corporation's procurement plan, to require the plan to assess the reliability of incorporating combined heat and power solutions to the maximum degree that is cost effective compared to other competing forms of wholesale generation, technologically feasible, and environmentally beneficial, particularly as it pertains to reducing emissions of carbon dioxide and other greenhouse gases. The bill would authorize the PUC to modify or adjust the requirements of the act for any electrical corporation with less than 100,000 service connections, as individual circumstances merit.

This bill would require a local publicly owned electric utility serving retail end-use customers to establish a program that allows retail end-use customers to utilize combined heat and power systems that reduce emissions of greenhouse gases by achieving improved efficiencies utilizing heat that would otherwise be wasted in separate energy applications and that provides a market for the purchase of excess electricity generated by a combined heat and power system, at a just and reasonable rate, to be determined by the governing body of the utility. By placing additional requirements upon local publicly owned electric utilities, the bill would impose a state-mandated local program.

This bill would require the Energy Commission, by January 1, 2010, to adopt guidelines that require combined heat and power systems be designed to reduce waste energy, be sized to meet the eligible customer-generator's, operate continuously in a manner that meets the expected thermal load and optimizes the efficient use of waste heat, and are cost effective, technologically feasible, and environmentally beneficial. The bill would authorize the Energy Commission to adopt temporary guidelines for combined heat and power systems prior to January 1, 2010. The bill would require an eligible customer-generator's combined heat and power system to meet certain

efficiency and emissions requirements. The bill would require an eligible customer-generator to adequately maintain and service the combined heat and power system so that during operation, the system continues to meet or exceed the efficiency and emissions requirements.

(2) The existing California Global Warming Solutions Act of 2006, requires the State Air Resources Board (state board) to adopt regulations to require the reporting and verification of statewide greenhouse gas emissions and to monitor and enforce compliance with the reporting and verification program, as specified, and requires the state board to adopt a statewide greenhouse gas emissions limit equivalent to the statewide greenhouse gas emissions levels in 1990 to be achieved by 2020. The act requires the state board to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective reduction in emissions of greenhouse gases and authorizes the state board to adopt market-based compliance mechanisms, as defined, meeting specified requirements. Existing law requires the PUC, by February 1, 2007, through a rulemaking proceeding and in consultation with the Energy Commission and the state board, to establish a greenhouse gases emission performance standard for all baseload generation of load-serving entities.

This bill would require that a combined heat and power system comply with the greenhouse gases emission performance standard established by the PUC.

(3) This bill would require the state board to report to the Governor and the Legislature by December 31, 2011, on the reduction in emissions of greenhouse gases resulting from the increase of new electrical generation that utilizes excess waste heat through combined heat and power systems and recommend policies that further the goals of the bill.

(4) Existing law makes any public utility, as defined, and any corporation other than a public utility, that violates or that fails to comply with any part of any order, decision, rule, direction, demand, or requirement of the PUC, guilty of a crime.

Because certain provisions of the bill would require PUC action to implement and a violation or failure to comply with any part of any order, decision, rule, direction, demand, or requirement of the PUC would be a crime, the bill would impose a state-mandated local program by creating a new crime.

(5) The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for a specified reason.

Vote: majority. Appropriation: no. Fiscal committee: ~~no~~ *yes*. State-mandated local program: ~~no~~ *yes*.

The people of the State of California do enact as follows:

SECTION 1. Chapter 8 (commencing with Section 2840) is added to Part 2 of Division 1 of the Public Utilities Code, to read:

CHAPTER 8. ENERGY EFFICIENCY SYSTEMS

Article 1. Waste Heat and Carbon Emissions Reduction Act

2840. This article shall be known and may be cited as the Waste Heat and Carbon Emissions Reduction Act.

2840.2. For purposes of this article, the following terms have the following meanings:

(a) "Combined heat and power system" means a system that produces both electricity and thermal energy for heating or cooling from a single fuel input that meets all of the following:

(1) Is interconnected to, and operates in parallel with, the electric transmission and distribution grid.

(2) Is sized to meet the eligible customer-generator's onsite thermal demand.

(3) Meets the efficiency standards of subdivisions (a) and (d), and the greenhouse gases emissions performance standard of subdivision (f) of Section 2843.

(b) "Eligible customer-generator" means a customer of an electrical corporation that meets both of the following requirements:

(1) Uses a combined heat and power system with a generating capacity of not more than 20 megawatts, that first commences operation on or after January 1, 2008.

(2) Uses a time-of-use meter capable of registering the flow of electricity in two directions. If the existing electrical meter of an

eligible customer-generator is not capable of measuring the flow of electricity in two directions, the eligible customer-generator shall be responsible for all expenses involved in purchasing and installing a meter that is able to measure electricity flow in two directions. If an additional meter or meters are installed, the electricity flow calculations shall yield a result identical to that of a time-of-use meter.

(c) "Electrical corporation" has the same meaning as defined in Section 218.

(d) "Energy Commission" means the State Energy Resources Conservation and Development Commission.

(e) "Excess electricity" means the net electricity exported to the electrical grid, generated by a combined heat and power system that is in compliance with Section 2843.

(f) "Greenhouse gas" or "greenhouse gases" includes all of the following gases: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

2840.4. The Legislature finds and declares all of the following:

(a) Combined heat and power systems produce both electricity and thermal energy from a single fuel input, thus achieving much greater efficiency than the usual separate systems for producing these forms of energy, and reducing consumption of fuel.

(b) Combined heat and power systems recover heat that would otherwise be wasted in separate energy applications, and use this heat to avoid consumption of fuel that would otherwise be required to produce heat.

(c) Gigawatthours of potential useful electricity and millions of British thermal units of thermal energy could be derived from unused waste heat that is currently being vented into the atmosphere.

2840.6. (a) It is the intent of the Legislature that state policies dramatically advance the efficiency of the state's use of natural gas by capturing unused waste heat, and in so doing, help offset the growing crisis in electricity supply and transmission congestion in the state.

(b) It is the intent of the Legislature to reduce wasteful consumption of energy through improved residential, commercial, institutional, industrial, and manufacturer utilization of waste heat whenever it is cost effective, technologically feasible, and environmentally beneficial, particularly when this reduces

emissions of carbon dioxide and other carbon-based greenhouse gases.

(c) It is the intent of the Legislature to support and facilitate both customer- and utility-owned combined heat and power systems.

(d) This article does not apply to, and shall not impact, combined heat and power systems in operation prior to January 1, 2008, or combined heat and power systems with a generating capacity greater than 20 megawatts.

2841. (a) The commission may require an electrical corporation to purchase from an eligible customer-generator, excess electricity that is delivered to the grid that is generated by a combined heat and power system that is in compliance with Section 2843. The commission may establish a maximum kilowatthours limitation on the amount of excess electricity that an electrical corporation is required to purchase if the commission finds that the anticipated excess electricity generated has an adverse effect on long-term resource planning or reliable operation of the grid. The commission shall establish, in consultation with the Independent System Operator, tariff provisions that facilitate both the provisions of this chapter and the reliable operation of the grid.

(b) (1) Every electrical corporation shall file with the commission a standard tariff for the purchase of excess electricity from an eligible customer-generator.

(2) The tariff shall provide for payment for every kilowatthour delivered to the electrical grid by the combined heat and power system at a price determined by the commission.

(3) The tariff shall include flexible rates with options for different durations, not to exceed 10 years, and fixed or variable rates relative to the cost of natural gas.

(4) The commission shall ensure that ratepayers not utilizing combined heat and power systems are held indifferent to the existence of this tariff.

(c) The commission, in reviewing the tariff filed by an electrical corporation, shall establish time-of-delivery rates that encourage demand management and net generation of electricity during periods of peak system demand.

(d) Every electrical corporation shall make the tariff available to eligible customer-generators that own, or lease, and operate a

combined heat and power system within the service territory of the electrical corporation, upon request. An electrical corporation may make the terms of the tariff available to an eligible customer in the form of a standard contract.

(e) The costs and benefits associated with any tariff or contract entered into by an electrical corporation pursuant to this section shall be allocated to all benefiting customers. For purposes of this section "benefiting customers" may, as determined by the commission, include bundled service customers of the electrical corporation, customers of the electrical corporation that receive their electric service through a direct transaction, as defined in subdivision (c) of Section 331, and customers of an electrical corporation that receive their electric service from a community choice aggregator, as defined in Section 331.1.

(f) The physical generating capacity of the combined heat and power system shall count toward the resource adequacy requirements of load-serving entities for purposes of Section 380.

(g) The commission shall adopt or maintain standby rates or charges for combined heat and power systems that are based only upon assumptions that are supported by factual data, and shall exclude any assumptions that forced outages or other reductions in electricity generation by combined heat and power systems will occur simultaneously on multiple systems, or during periods of peak electrical system demand, or both.

(h) The commission may modify or adjust the requirements of this article for any electrical corporation with less than 100,000 service connections, as individual circumstances merit.

2841.5. A local publicly owned electric utility serving retail end-use customers shall establish a program that does both of the following:

(a) Allows retail end-use customers to utilize combined heat and power systems that reduce emissions of greenhouse gases by achieving improved efficiencies utilizing heat that would otherwise be wasted in separate energy applications.

(b) Provides a market for the purchase of excess electricity generated by a combined heat and power system, at a just and reasonable rate, to be determined by the governing body of the utility.

2842. The commission, in approving a procurement plan for an electrical corporation pursuant to Section 454.5, shall require

that the electrical corporation's procurement plan incorporate combined heat and power solutions to the extent that it is cost effective compared to other competing forms of wholesale generation, technologically feasible, and environmentally beneficial, particularly as it pertains to reducing emissions of carbon dioxide and other greenhouse gases.

2842.2. The commission shall ensure that an electrical corporation utilizes long-term planning and a reliability assessment for upgrades to its transmission and distribution systems and that any upgrades are not inconsistent with promoting combined heat and power systems that are cost effective, technologically feasible, and environmentally beneficial, particularly as those combined heat and power systems reduce emissions of greenhouse gases.

2842.4. (a) The commission shall, for each electrical corporation, establish a pay-as-you-save pilot program for eligible customers.

(b) For the purposes of this section, an "eligible customer" means a customer of an electrical corporation that meets the following criteria:

(1) The customer uses a combined heat and power system with a generating capacity of not more than 20 megawatts that is in compliance with Section 2843.

(2) The customer is a nonprofit organization described in Section 501(c) (3) of the Internal Revenue Code (26 U.S.C. Sec. 501(c) (3)), that is exempt from taxation under Section 501(a) of that code (26 U.S.C. Sec. 501(a)).

(c) The pilot program shall enable an eligible customer to finance all of the upfront costs for the purchase and installation of a combined heat and power system by repaying those costs over time through on-bill financing at the difference between what an eligible customer would have paid for electricity and the actual savings derived for a period of up to 10 years.

(d) The commission shall ensure that the reasonable costs of the electrical corporation associated with the pilot program are recovered.

(e) All costs of the pay-as-you-save program or financing mechanisms shall be borne solely by the combined heat and power generators that use the program or financing mechanisms, and the commission shall ensure that the costs of the program are not

shifted to the other customers or classes of customers of the electrical corporation.

(f) Each electric corporation shall make on-bill financing available to eligible customers until the statewide cumulative rated generating capacity from pilot program combined heat and power systems in the service territories of the three largest electrical corporations in the state reaches 100 megawatts. An electrical corporation shall only be required to participate in the pilot program until it meets its proportionate share of the 100-megawatt limitation, based on the percentage of its peak demand to the total statewide peak demand within the service territories of all electrical corporations.

2843. (a) The Energy Commission shall, by January 1, 2010, adopt guidelines that combined heat and power systems subject to this chapter shall meet, and shall accomplish all of the following:

(1) Reduce waste energy.

(2) Be sized to meet the eligible customer-generator's thermal load.

(3) Operate continuously in a manner that meets the expected thermal load and optimizes the efficient use of waste heat.

(4) Are cost effective, technologically feasible, and environmentally beneficial.

(b) It is the intent of the Legislature that the guidelines do not permit customers to operate as de facto wholesale generators with guaranteed purchasers for their electricity.

(c) Notwithstanding any other provisions of law, the guidelines required by this section shall be exempt from the requirements of Chapter 3.5 (commencing with Section 11340) of Part 1 of Division 3 of Title 2 of the Government Code. The guidelines shall be adopted at a publicly noticed meeting offering all interested parties an opportunity to comment. At least 30 days' public notice shall be given of the meeting required by this section, before the Energy Commission initially adopts guidelines. Substantive changes to the guidelines shall not be adopted without at least 10 days' written notice to the public.

(d) Prior to January 1, 2010, the Energy Commission may adopt temporary guidelines for combined heat and power systems that comply with the parameters set forth in subdivision (a).

(e) (1) An eligible customer-generator's combined heat and power system shall meet an oxides of nitrogen (NOx) emissions

rate standard of 0.07 pounds per megawatthour and a minimum efficiency of 60 percent. A minimum efficiency of 60 percent shall be measured as useful energy output divided by fuel input. The efficiency determination shall be based on 100-percent load.

(2) An eligible customer-generator's combined heat and power system that meets the 60-percent efficiency standard may take a credit to meet the applicable NOx emissions standard of 0.07 pounds per megawatthour. Credit shall be at the rate of one megawatthour for each 3.4 million British thermal units of heat recovered.

(f) An eligible customer-generator's combined heat and power system shall comply with the greenhouse gases emission performance standard established by the commission pursuant to Section 8341.

(g) An eligible customer-generator shall adequately maintain and service the combined heat and power system so that during operation, the system continues to meet or exceed the efficiency and emissions standards established pursuant to subdivisions (a), (d), and (f).

2845. The State Air Resources Board shall report to the Governor and the Legislature by December 31, 2011, on the reduction in emissions of greenhouse gases resulting from the increase of new electrical generation that utilizes excess waste heat through combined heat and power systems and recommend policies that further the goals of this article.

SEC. 2. No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because certain costs that may be incurred by a local agency or school district will be incurred because this act creates a new crime or infraction, eliminates a crime or infraction, or changes the penalty for a crime or infraction, within the meaning of Section 17556 of the Government Code, or changes the definition of a crime within the meaning of Section 6 of Article XIII B of the California Constitution.

With respect to certain other expenses, no reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because a local agency or school district has the authority to levy service charges, fees, or assessments sufficient to pay for the program or level of service mandated by

this act, within the meaning of Section 17556 of the Government Code.

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